

## METHOD AND APPARATUS FOR MARKING AND IDENTIFYING LIQUIDS

### Abstract

A liquid can be marked for identification purposes with at least first and second  
5 miscible markers. The markers are mixed in the liquid so that the ratio of the  
concentration of the first marker to the concentration of the second marker is  
substantially equal to a predetermined value. Thus, by comparing the ratio of the  
measured concentration of the first marker to the measured concentration of the second  
marker with predetermined values the liquid can be uniquely identified. In one  
10 embodiment, a multi-channel infrared fuel analyzer (10) is disclosed for identifying fuel  
samples in an examination vessel or flow tube (12). Radiation source (16) is provided  
on one side of tube (12) for illuminating the flowing fuel (14). Detectors (20A, 20B, and  
20C) assigned to specific channels, are provided on the other side of the tube for  
detecting absorption associated with the presence of an assigned fuel marker. The  
15 infrared light source and detectors can be connected to a processor and control unit (22)  
for initiation of testing, for processing of detection signal from the detectors, and for  
display of readout information. Processor and control unit (22) can include a look up  
table (23) for storing information about marking patterns, a comparison element (35) for  
comparing measured values with values supplied by look up table (23), and a display  
20 (30).